

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method for driving an electro-optical device having a plurality of pixels, each of which includes a signal line and at least one switching element, said method comprising the step of:

applying pulses to said signal line at intervals during one frame, wherein said intervals are T_1 between the i -th pulse and the $(i+1)$ -th pulse, $2^l T_1$ between the $(i+1)$ -th pulse and the $(i+2)$ -th pulse, and $2T_1$ between the $(i+2)$ -th pulse and the $(i+3)$ -th pulse, where l is a natural number and T_1 is a constant period,

wherein said switching element comprises:

a crystalline semiconductor film comprising silicon over a substrate having an insulating surface; and

at least one gate electrode adjacent to said crystalline semiconductor film with a gate insulating film interposed therebetween.

2. (Original) A method according to claim 1, wherein said electro-optical device is a liquid crystal display device.

3. (Original) A method according to claim 2, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

4. (Previously Presented) A method according to claim 1, wherein said switching element is a thin film transistor.

5. (Original) A method according to claim 4, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

6. (Currently Amended) A method for driving an electro-optical device having a plurality of pixels, each of which includes a signal line and at least one switching element, said method comprising the step of:

applying pulses to said signal line at intervals during one frame,

wherein the intervals between the i -th pulse and $(i+1)$ -th pulse is $2^{i-1}T_1$ are T_1 between the i -th pulse and the $(i+1)$ -th pulse, 2^iT_1 between the $(i+1)$ -th pulse and the $(i+2)$ -th pulse, and $2^{i+1}T_1$ between the $(i+2)$ -th pulse and the $(i+3)$ -th pulse, where i is a natural number and T_1 is a constant period,

wherein said switching element comprises:

a crystalline semiconductor film comprising silicon over a substrate having an insulating surface, and

at least one gate electrode adjacent to said crystalline semiconductor film with a gate insulating film interposed therebetween.

7. (Previously Presented) A method according to claim 6, wherein said electro-optical device is a liquid crystal display device.

8. (Original) A method according to claim 7, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

9. (Previously Presented) A method according to claim 6, wherein said switching element is a thin film transistor.

10. (Original) A method according to claim 9, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

11. (Previously Presented) A method according to claim 6, wherein said T_1 is less than 100 μ sec.

12. (Withdrawn) A method for driving an electro-optical device having a plurality of pixels, each of which includes a signal line and at least one switching element, said method comprising the step of:

applying pulses to said signal line at intervals during one frame, wherein said intervals are arranged so that the interval between the i -th pulse and $(i+1)$ -th pulse is $2^{n-1}T_1$, where n is a voluntary natural number, i is a natural number, and T_1 is a constant period,

wherein said switching element comprises:

a crystalline semiconductor film comprising silicon over a substrate having an insulating surface, and

at least one gate electrode adjacent to said crystalline semiconductor film with a gate insulating film interposed therebetween.

13. (Withdrawn) A method according to claim 12, wherein said electro-optical device is a liquid crystal display device.

14. (Withdrawn) A method according to claim 13, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

15. (Withdrawn) A method according to claim 12, wherein said switching element is a thin film transistor.

16. (Withdrawn) A method according to claim 15, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

17. (Withdrawn) A method according to claim 12, wherein said T_1 is less than 100μ sec.

18. (Withdrawn) A method for driving an electro-optical device having a plurality of pixels, each of which includes a signal line and at least one switching element, said method comprising the step of:

applying pulses to said signal line at intervals during one frame, wherein said intervals are determined in accordance with a desired tone of the pixel associated with said signal line,

wherein said switching element comprises:

a crystalline semiconductor film comprising silicon over a substrate having an insulating surface;

at least one gate electrode adjacent to said crystalline semiconductor film with a gate insulating film interposed therebetween, and

a leveling film comprising organic resin to provide an upper surface over said switching element.

19. (Withdrawn) A method according to claim 18, wherein said electro-optical device is a liquid crystal display device.

20. (Withdrawn) A method according to claim 19, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of

twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

21. (Withdrawn) A method according to claim 18, wherein said switching element is a thin film transistor.

22. (Withdrawn) A method according to claim 21, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

23. (Withdrawn) A method for driving an electro-optical device having a plurality of pixels, each of which includes a signal line and at least one switching element, said method comprising the step of:

applying pulses to said signal line at intervals during one frame,

wherein said intervals are arranged so that the interval between the i -th pulse and $(i+1)$ -th pulse is $2^{i-1}T_1$, where i is a natural number and T_1 is a constant period,

wherein said switching element comprises:

a crystalline semiconductor film comprising silicon over a substrate having an insulating surface;

at least one gate electrode adjacent to said crystalline semiconductor film with a gate insulating film interposed therebetween, said gate electrode electrically connected to said signal line, and

a leveling film comprising organic resin to provide an upper surface over said switching element.

24. (Withdrawn) A method according to claim 23, wherein said electro-optical device is a liquid crystal display device.

25. (Withdrawn) A method according to claim 24, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

26. (Withdrawn) A method according to claim 23, wherein said switching element is a thin film transistor.

27. (Withdrawn) A method according to claim 26, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

28. (Withdrawn) A method according to claim 23, wherein said T_1 is less than 100μ sec.

29. (Withdrawn) A method for driving an electro-optical device having a plurality of pixels, each of which includes a signal line and at least one switching element, said method comprising the step of:

applying pulses to said signal line at intervals during one frame,

wherein said intervals are arranged so that the interval between the i -th pulse and $(i+1)$ -th pulse is $2^{n-1}T_1$, where n is a voluntary natural number, i is a natural number, and T_1 is a constant period,

wherein said switching element comprises:

a crystalline semiconductor film comprising silicon over a substrate having an insulating surface;

at least one gate electrode adjacent to said crystalline semiconductor film with a gate insulating film interposed therebetween, said gate electrode electrically connected to said signal line, and

a leveling film comprising organic resin to provide an upper surface over said thin film transistor.

30. (Withdrawn) A method according to claim 29, wherein said electro-optical device is a liquid crystal display device.

31. (Withdrawn) A method according to claim 30, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

32. (Withdrawn) A method according to claim 29, wherein said switching element is a thin film transistor.

33. (Withdrawn) A method according to claim 32, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

34. (Withdrawn) A method according to claim 29, wherein said T_1 is less than 100μ sec.

35. (Previously Presented) A method for driving an electro-optical device having a plurality of pixels, each of which includes a signal line and at least one switching element, said method comprising the step of:

applying pulses to said signal line at intervals during one frame,

wherein the intervals are T_1 between the i -th pulse and the $(i+1)$ -th pulse, $2^i T_1$ between the $(i+1)$ -th pulse and the $(i+2)$ -th pulse, $2T_1$ between the $(i+2)$ -th pulse and the $(i+3)$ -th pulse, and $2^{i-1}T_1$ between the $(i+3)$ -th pulse and the $(i+4)$ -th pulse where i is a natural number and T_1 is a constant period,

wherein said switching element comprises:

a crystalline semiconductor film comprising silicon over a substrate having an insulating surface, and

at least one gate electrode adjacent to said crystalline semiconductor film with a gate insulating film interposed therebetween.

36. (Previously Presented) A method according to claim 35, wherein said electro-optical device is a liquid crystal display device.

37. (Previously Presented) A method according to claim 36, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

38. (Previously Presented) A method according to claim 35, wherein said switching element is a thin film transistor.

39. (Previously Presented) A method according to claim 38, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

40. (Previously Presented) A method according to claims 35, wherein said T_1 is less than 100 μ sec.

41. (New) A method for driving a television having a display unit and a tuner for receiving television radio wave, said method comprising the step of:

applying pulses to said signal line at intervals during one frame, wherein said intervals are T_1 between the i -th pulse and the $(i+1)$ -th pulse, $2T_1$ between the $(i+1)$ -th pulse and the $(i+2)$ -th pulse, and $2T_1$ between the $(i+2)$ -th pulse and the $(i+3)$ -th pulse, where i is a natural number and T_1 is a constant period,

wherein said display unit includes a plurality of pixels, and

wherein each of said pixels includes a signal line and at least one switching element.

42. (New) A method according to claim 41, wherein display unit is a liquid crystal display device.

43. (New) A method according to claim 42, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

44. (New) A method according to claim 41, wherein said switching element is a thin film transistor.

45. (New) A method according to claim 44, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.

46. (New) A method for driving a television having a display unit and a tuner for receiving television radio wave, said method comprising the step of:

applying pulses to said signal line at intervals during one frame,

wherein the intervals are T_1 between the i -th pulse and the $(i+1)$ -th pulse, $2T_1$ between the $(i+1)$ -th pulse and the $(i+2)$ -th pulse, $2T_1$ between the $(i+2)$ -th pulse and the

$(i+3)$ -th pulse, and $2^{i-1}T_1$ between the $(i+3)$ -th pulse and the $(i+4)$ -th pulse where i is a natural number and T_1 is a constant period,

wherein said display unit includes a plurality of pixels, and

wherein each of said pixels includes a signal line and at least one switching element.

47. (New) A method according to claim 46, wherein display unit is a liquid crystal display device.

48. (New) A method according to claim 47, wherein said liquid crystal display device comprises a liquid crystal material selected from the group consisting of twisted nematic liquid crystal, super twisted nematic, ferroelectric liquid crystal, antiferroelectric liquid crystal, dispersion liquid crystal, and polymer liquid crystal.

49. (New) A method according to claim 46, wherein said switching element is a thin film transistor.

50. (New) A method according to claim 49, wherein said thin film transistor is an n-channel type thin film transistor or a p-channel type thin film transistor.